

**Notice of Allowability**

Application No.

10/034,206

Examiner

Patricia L. Hailey

Applicant(s)

DING ET AL.

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an amendment filed on November 18, 2003.
2. ☒ The allowed claim(s) is/are 1-12 and 14.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____.            |
| 3 <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No. _____  | 7 <input type="checkbox"/> Examiner's Amendment/Comment                             |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|   | 9 <input type="checkbox"/> Other _____.   |

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Applicants' remarks and amendments, filed on November 18, 2003, have been carefully considered. In this amendment, claim 13 has been canceled, and new claim 14 has been added.

Claims 1-12 and 14 are now pending in this application.

#### *Withdrawn Rejections and Objections*

The objection to the Specification stated in the previous Office Action has been withdrawn in view of Applicants' addition of Table 1, which was present in the originally filed Specification. The Table was inadvertently omitted in the Substitute Specification filed by Applicants on April 1, 2002.

The 101 rejection of claim 13 for being directed to non-statutory subject matter has been withdrawn in view of Applicants' cancellation of this claim.

#### *Allowable Subject Matter*

1. Claims 1-12 and 14 are allowed.

#### *Reasons for Allowance*

2. The following is an examiner's statement of reasons for allowance:

The prior art does not teach or suggest the claimed activated carbon supported cobalt based catalyst, comprising a substantially high dispersion of at least one of a zirconium component, a cerium component, a ruthenium component, or potassium component in a porous carbon matrix, and elemental cobalt either deposited thereon or substantially uniformly dispersed therein

Wilson et al. (U. S. Patent No. 5,780,381) teach a catalyst comprising cobalt promoted with zirconium, molybdenum, or zirconium and molybdenum on a small diameter alumina support. Wilson et al. do not teach or suggest the feasibility in employing a carbon support.

Mauldin et al. (U. S. Patent No. 4,977,126) teach catalyst comprising cobalt impregnated or dispersed on a particulate porous inorganic support, notably alumina, silica, silica-alumina, and titania

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(col. 2, line 66 to col. 3, line 24). The catalyst may also contain additional metals, such as zirconium and cerium (col. 3, lines 25-41). Mauldin et al. do not teach or suggest the employment of a carbon support.

Augustine et al. (U. S. Patent No. 5,502,019) teach catalyst compositions prepared by a coprecipitation method. The compositions comprise an oxide of cobalt as a principal component with one or more metals, such as zirconium and cerium (col. 2, lines 1-65; col. 3, lines 4-29). While this reference discloses that the catalyst compositions may be placed on a support, the reference does not teach or suggest specific examples of supports, except to say "an inert material that does not enter the carbon monoxide conversion reaction,..." (col. 3, lines 43-47).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Hailey whose telephone number is (703) 308-3317. The examiner can normally be reached on Mondays-Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on (703) 308-3823. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

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After the move to the new USPTO Headquarters in Alexandria, Virginia, tentatively scheduled for the week of December 22, 2003, Examiner Hailey's new phone number will be (571) 272-1369 and Mr. Bell's new phone number will be (571) 272-1362.

  
Lynn Hailey/plh  
Examiner, Art Unit 1755  
December 15, 2003

  
**C. MELISSA KOSLOW**  
**PRIMARY EXAMINER**